

# ENERGY STAR®?

helps protect the environment by reducing air pollution and global warming associated with energy production.

In addition to heating and cooling, more than 30 product categories, including lighting, appliances, home office equipment, and consumer electronics, feature the ENERGY STAR label.

## HEATING AND COOLING EQUIPMENT

### AIR-SOURCE/GEOTHERMAL HEAT PUMPS

Electric air-source heat pumps use the difference between indoor and outdoor air temperatures to heat and cool inside air. Geothermal heat pumps use the ground instead of outside air to provide heating, air conditioning, and hot water. ENERGY STAR labeled models use 15-30 percent less energy than standard equipment.



### FURNACES

Older furnaces cost more to operate per year than new ENERGY STAR labeled models, which are about 20 percent more efficient.

### CEILING FANS

ENERGY STAR labeled ceiling fans operate 40 percent more efficiently than conventional fans—resulting in 180 kWh or \$15 per year in electric bill savings.

### VENTILATING FANS

ENERGY STAR labeled ventilating fans perform better, last longer, and are typically less noisy than conventional models because they use high-performance motors and better components. Qualified fans consume on average more than 65 percent less energy than conventional models.

For more information, visit [www.energystar.gov](http://www.energystar.gov), or call 1-888-STAR-YES (1-888-782-7937).



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CONTENT)



## heating and cooling systems



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# WHAT IS ENERGY STAR?

ENERGY STAR is a label that identifies energy-efficient products, such as heating and cooling equipment, which meet guidelines set by the US Environmental Protection Agency (EPA) and the US Department of Energy (DOE).

ENERGY STAR labeled products save energy and money without sacrificing performance—one solution to energy supply and cost concerns. ENERGY STAR also

## ENERGY STAR LABELED HEATING AND COOLING EQUIPMENT

ENERGY STAR labeled heating and cooling equipment can save 10-40 percent on heating and cooling bills and may also improve the comfort level in your home.

### AIR CONDITIONERS

Compared to conventional models, ENERGY STAR labeled central air conditioners and room air conditioners reduce energy waste by at least 20 and 10 percent, respectively. Replacing an old central air conditioner with a new ENERGY STAR labeled model saves about \$50 per year in electricity depending on climate and the size of the unit you're replacing.



### BOILERS

An ENERGY STAR labeled boiler with technologies such as electric ignition and sealed combustion can save about 10 percent on heating bills.

### PROGRAMMABLE THERMOSTATS

Automatically adjust your home's temperature setting to help save energy when you're asleep or not at home. Within a few years, programmable thermostats will pay for themselves in energy saved by maintaining the highest or lowest required temperatures for four to five hours each day, rather than a full 24 hours.

To locate a store near you that carries ENERGY STAR labeled heating and cooling equipment, use our store locator at [www.energystar.gov/consumer](http://www.energystar.gov/consumer). You can even calculate your savings by using the simple savings calculator. Just select "find products," click on "heating and cooling," and choose the item you are interested in.



SAVE ENERGY, SAVE MONEY

Heating and cooling can account for nearly half the energy use in your home. Since these systems generally last 10 years or more, it could be one of the biggest home investments you make. While some ENERGY STAR labeled heating and cooling products may cost more initially, they can yield annual returns of 10-40 percent in lower heating and cooling bills. Investing in energy-efficient systems can also add value to your home. Prospective buyers pay attention to utility bills, and many are willing to pay more for a home that costs less to heat and cool.

HELP PROTECT THE ENVIRONMENT

Residential heating and cooling systems often burn fossil fuels that contribute to a host of air pollution problems, including smog, acid rain, and global warming. Simply put, the less energy we use in our homes, the less air pollution we generate. If just one household in ten bought ENERGY STAR heating and cooling equipment, the change would keep more than 17 billion pounds of pollution out of our air this year. Buying energy-efficient heating and cooling equipment is an easy way to make a difference.

CHANGE TO ENERGY STAR LABELED HEATING AND COOLING

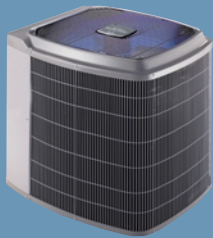


To maximize the energy efficiency of your system, follow these suggestions:

**Beware of Oversizing**—When replacing an existing unit, don’t assume your new unit should be the same size—or based solely on your home’s square footage. Today’s equipment is more efficient, and your original system may have been sized improperly. If your current unit doesn’t heat or cool adequately, it may be a system or installation problem.



**Ensure Proper Airflow and Refrigerant Charge**—Contractors should test for adequate airflow at the indoor coil and verify that the system has been charged in accordance with manufacturer’s guidelines. Complete duct leakage repairs before conducting tests.



**Size, Seal, and Insulate Ducts**—This can increase your system’s efficiency by as much as 20 percent. A properly installed duct system will be quieter, more comfortable, and save up to \$140 annually. Sealing ducts helps heat and cool your house evenly. It also protects against equipment backdraft and reduces the circulation of pollutants, such as mold, dust, and household chemical fumes. A contractor can identify leaks and fix them with a quality duct sealant such as mastic, metal-backed tape, or aerosol-based sealing. For information, visit [www.energystar.gov/ducts](http://www.energystar.gov/ducts).



**Install Programmable Thermostats Properly**—Thermostats should be placed away from direct sunlight, drafts, doorways, and windows for optimal performance.

ENERGY STAR HEATING AND COOLING SYSTEM CHECKLIST

To make an educated decision when installing an ENERGY STAR labeled heating, ventilation, and cooling (HVAC) system, follow this checklist.

- ☐ **Hiring a contractor.** Use an experienced, licensed contractor who has worker’s compensation coverage as well as liability and property insurance. Ask for a NATE-certified technician. To use NATE’s contractor locator, visit [www.natex.org](http://www.natex.org). The contractor should also be certified to handle refrigerant for cooling systems. Good contractors will provide written contracts of all work to be done as well as warranties that accompany the equipment.
- ☐ **Purchasing an ENERGY STAR labeled HVAC system.** Before purchasing the system, ask the contractor to calculate the “size” of the system using computer software or industry guidelines. Also, have the contractor check the airflow. Proper sizing and airflow will make your equipment more efficient and save you money. When deciding on an ENERGY STAR labeled system, ask the contractor to estimate your utility bill savings and costs. Although ENERGY STAR labeled equipment may cost more initially, you will be rewarded with savings over the lifetime of the equipment.
- ☐ **Installing an ENERGY STAR labeled HVAC system.** A certified technician should:
  - Install equipment in easily accessible areas for easy maintenance
  - Inspect ducts for air leaks and incomplete connections. Use the ENERGY STAR Duct Specification to determine your duct’s performance
  - Consider a house pressurization test to protect against combustion gases from being pulled into your home
  - Replace indoor and outdoor coils for maximum efficiency
- ☐ **Maintaining an ENERGY STAR labeled HVAC system.** Routine maintenance, such as changing your air filters, will ensure that you continue to receive your energy savings into the future. In addition, professional routine maintenance will help save you energy, as well as lengthen the life of your system, protect your equipment’s warranty, prevent equipment failure, and keep your home safe from unwanted combustion gases.

